

João Vitor Bermal Santaniello

Software Engineer · Geospatial Data, Full-Stack and E-commerce

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SUMMARY

Software engineer with six years of production experience in water utilities, energy, healthcare and telecom. I build Python and GeoPandas data pipelines, ArcGIS Enterprise dashboards, FastAPI and Node.js services and React/Next.js applications. For Aegea, one of the largest sanitation groups in Brazil, I cut a recurring geospatial workflow from 3+ hours to about 20 minutes and built the analyses behind its expansion studies. MBA in Software Engineering (USP/ESALQ, thesis 9/10). Fluent English with US teams.

EXPERIENCE

Software Developer, Bizpoke Soluções em Software · São José dos Campos, SP Dec 2022 to Present

- Cut a recurring geospatial workflow at Aegea from more than 3 hours to about 20 minutes by building a reusable Python and GeoPandas extraction tool with parallel spatial joins, validation and Excel/Shapefile export.
- Delivered census tract indicators for 16 Brazilian states by crossing IBGE, CNEFE and ANEEL BDGD data, supporting water and sewer concession studies.
- Co-designed the CITIUS/Regenera landfill biogas data model and loaded its historical data, feeding ArcGIS dashboards, web maps and heatmaps used by operations.
- Kept production dashboards running through the ArcGIS Enterprise 11.5 migration and automated weekly routines with ArcGIS toolboxes, Python, FME and PostgreSQL.
- Led front-end and mobile delivery for DOMO (Equatorial Energia): offline map editing in React Native plus Next.js, TypeScript and Redux screens designed in Figma.
- Built OCR exam processing (AWS Textract, S3) for teleophthalmology and ISPDrive, a SaaS for internet providers (Next.js, FastAPI, DigitalOcean Spaces).

AI Coding Benchmark Contributor (freelance), Alignerr · Remote May 2025 to Present

- Wrote Python problems, reference solutions and test suites for LiveCodeBench and BigCodeBench, each designed to break at least 2 of 4 frontier code models.

Software Development Intern, Bizpoke Soluções em Software · São José dos Campos, SP Apr 2021 to Dec 2022

- Shipped React, Node.js, Python and C# features and produced spatial data with ArcGIS Pro and Enterprise alongside offshore teams.

EDUCATION

MBA in Software Engineering, Universidade de São Paulo (USP/ESALQ) 2024 to 2026
Thesis graded 9/10: deep learning pipeline for retinal images (Dice 0.827, A/V macro F1 0.963).

Associate degree in Systems Analysis and Development, Universidade Paulista (UNIP) 2021 to 2022

Technical Program in Computing, with high school, Colégio Técnico Antônio Teixeira Fernandes 2018 to 2020

SKILLS

Languages: Python, TypeScript, JavaScript, SQL, Bash

Data and GIS: GeoPandas, ArcGIS Pro, ArcGIS Enterprise 11.5, ArcGIS Dashboards, Experience Builder, ArcGIS JS API, FME, PostgreSQL, enterprise geodatabases, ETL and data modeling

Back end: FastAPI, Node.js, REST APIs, JWT, OAuth, WebSockets, MongoDB, PostgreSQL

Front end and mobile: React, Next.js, Redux Toolkit, Tailwind CSS, MUI, React Native (Expo), Figma

Cloud and DevOps: Docker, Docker Compose, NGINX, Linux, AWS (S3, Textract, EC2), DigitalOcean Spaces, Vercel, Kubernetes (basic)

AI and ML: PyTorch, OpenCV, NumPy, Albumentations, OCR, LLM evaluation, AI coding agents (Claude Code, MCP)

LANGUAGES

Portuguese (native) · English (fluent, daily professional use)